

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the amendments above and the following remarks. By virtue of the amendment, claims 7-9, 12-20, 26-29, and 31-41 are pending in the present application of which claims 7, 13 and 26 are independent.

Claims 7-9, and 32-35 were rejected under 35 U.S.C. § 102(b) as being anticipated by DiMaria et al. (4,939,559). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Kojima (5,644,528). Claims 26-29 and 39-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Simpson (6,362,504). Claim 31 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. and Simpson as applied to claim 26 and further in view of Kojima. Claims 13-16, 20, and 36-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Noguchi (6,005,270). Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. and Noguchi as applied to claim 13 and further in view of Kojima. Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. and Noguchi as applied to claim 13 and further in view of Ngo (6,420,752). The above rejections are respectfully traversed for at least the reasons set forth below.

**Personal Interview Conducted**

The Applicants wish to thank Examiner Weiss for granting the personal interview conducted on May 28, 2004. It was agreed that the prior art fails to teach or suggest a diffused metal path, including diffusive metal from a gate electrode, connecting the diffusive

**PATENT**

Atty Docket No.: 10015160-1  
App. Ser. No.: 09/934,548

metal gate electrode to the at least one floating gate through a first gate insulator layer in response to the application of a write voltage to the gate electrode. Independent claims 7, 13 and 26 have been amended to include these features or similar features. Accordingly, claims 7-9, 12-20, 26-29, and 31-41 are believed to be allowable.

*Claim Rejection Under 35 U.S.C. §102*

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrick GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

Claims 7-9 and 32-35 were rejected under 35 U.S.C. § 102(b) as being anticipated by DiMaria et al. Claim 7 has been amended to include the following:

a diffused metal path including diffusive metal from the gate electrode connecting the diffusive metal gate electrode to the at least one floating gate

through the first gate insulator layer in response to the application of a write voltage to the gate electrode.

Independent claims 13 and 26 have been amended to include similar features. As agreed upon in the personal interview, none of these features are taught or suggested by the prior art. Specifically, the Official Action cited Dimaria et al. to teach a diffused metal path. However, Dimaria et al. fails to teach this feature. Dimaria et al., as shown in figure 1, discloses a metal conductor 2, injector layers 1 and 3, and a floating gate 4. When a negative voltage is applied to the conductor 2, an electric field is generated causing the injector layer 1 to inject electrons which flow towards the floating gate 4. *See* column 6, lines 49-54. However, Dimaria et al. fails to teach a metal path including diffusive metal from the conductor 2 connecting the conductor 2 and the floating gate 4. Accordingly, Dimaria et al. fails to teach or suggest all the features of claims 7-9, and 32-35, and these claims are believed to be allowable.

*Claim Rejection Under 35 U.S.C. §103*

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claims 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Kojima. Claims 26-30 and 39-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Simpson. Claim 31 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Simpson in further view of Kojima. Claims 13-16, 20, and 36-38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Noguchi. Claims 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Noguchi in further view of Kojima. Claims 18-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DiMaria et al. in view of Noguchi in further view of Ngo et al.

None of Dimaria et al., Kojima, Simpson, Noguchi, and Ngo et al. teach or suggest all the features of the claims rejected under 35 U.S.C. § 103(a). Independent claim 13 recites:

a diffused metal path including diffusive metal from the gate electrode connecting the diffusive metal gate electrode to the at least one floating gate through the first gate insulator layer in response to the application of a write voltage to the gate electrode.

Independent claim 26 recites similar features. As agreed upon in the personal interview, none of the prior art fails to teach or suggest a diffusive metal path, including diffusive metal from a gate electrode, connecting the gate electrode to a floating gate via an insulator.

Accordingly, claims 12-20, 26-29, 31, and 36-41 are believed to be allowable.

**PATENT**

Atty Docket No.: 10015160-1  
App. Ser. No.: 09/934,548

Conclusion

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Ping MEI et al.

Dated: May 28, 2004

By



Ashok K. Mannava  
Registration No. 45,301

MANNAVA & KANG, P.C.  
281 Murtha Street  
Alexandria, VA 22304  
(703) 628-1461  
(703) 991-1162 (facsimile)